

## 6. NOTES ON WEIGHT AND SIZE AT BIRTH OF EIGHT SPECIES OF INDIAN WILD UNGULATES IN CAPTIVITY

The present note embodies some data on the weight and size at birth of eight species of Indian wild ungulates in captivity observed at the Nandankanan Biological Park, Orissa. The weight and size at birth were recorded either immediately after birth or within about twelve hours of birth. The details of our observations are given in the Table.

average weight of nine sambar fawns at birth was 8.270 Kg, the average length 98 cm and the average shoulder height was 53 cm (Acharjyo 1970).

SPOTTED DEER: The weight at birth of twenty-four fawns of this species was from 2.200 Kg to 4.000 Kg with an average of 3.129 Kg, the length was from 65 cm to 79 cm with an ave-

TABLE

Species of wild ungulates	Period of observation	No. of specimens under study	Mean weight (Range) in Kg	Mean total length (Range) in cm	Mean shoulder height (Range) in cm
1	2	3	4	5	6
Indian Sambar ( <i>Cervus unicolor niger</i> )	1-7-1972 to 31-7-1980	20	10.270 (7.000-12.300)	99.4 (88.0-107.0)	55.1 (49.0-59.0)
Spotted Deer ( <i>Axis axis</i> )	1-7-1972 to 31-7-1980	34	2.991 (2.200-4.000)	71.1 (65.0-77.0)	37.7 (33.0-40.0)
Hog Deer ( <i>Axis porcinus</i> )	1-7-1972 to 31-7-1980	6	2.365 (2.000-2.740)	57.1 (54.0-60.0)	30.0 (27.0-32.0)
Barking Deer ( <i>Muntiacus muntjak</i> )	1-7-1972 to 31-7-1980	22	1.554 (1.200-2.010)	51.0 (45.0-56.0)	26.6 (24.0-30.0)
Mouse Deer ( <i>Tragulus meminna</i> )	1-7-1972 to 31-7-1980	4	0.319 (0.288-0.382)	27.9 (26.5-30.5)	14.6 (14.0-16.0)
Black Buck ( <i>Antelope cervicapra</i> )	1-7-1972 to 31-7-1980	33	3.276 (2.600-4.200)	68.5 (64.0-75.0)	38.4 (36.0-44.0)
Four-horned Antelope ( <i>Tetracerus quadricornis</i> )	1-4-1974 to 31-7-1980	7	0.942 (0.740-1.065)	43.4 (42.0-46.0)	25.4 (24.0-27.5)
Indian Wild Boar ( <i>Sus scrofa cristatus</i> )	1-10-1972 to 31-7-1980	7	0.681 (0.630-0.715)	36.4 (34.0-38.0)	16.2 (15.5-17.0)

The observations on weight and size at birth of these eight species of Indian wild ungulates as reported by earlier workers are given as follows.

INDIAN SAMBAR: At birth the weight of seventeen sambar fawns was from 7.600 Kg to 11.000 Kg with an average of 9.653 Kg, the length was from 91 cm to 106 cm with an average of 98.8 cm whereas the shoulder height was from 53 cm to 58 cm with an average of 55.2 cm (Acharjyo and Misra 1972). The

range of 72.6 cm and the shoulder height was from 36 cm to 44 cm with an average of 39.7 cm (Acharjyo and Misra 1972). The average weight of 33 fawns was 3.320 Kg, the average length was 71 cm and the average shoulder height was 39 cm at birth (Acharjyo 1970). The weight at birth of two male spotted deer fawns was 3.630 and 4.500 and their total lengths were 77 cm and 74 cm (Sankhala and Desai 1969).

HOG DEER: At birth the average weight of

three premature and dead fawns were 1.333 Kg and their average length was 51.7 cm (Acharjyo and Misra 1972). Sankhala and Desai (1969) stated that the three Hog deer fawns weighed from 1.500 Kg to 3.180 Kg and measured 53.0 cm to 57.8 cm in total length at birth.

**BARKING DEER:** According to Sankhala and Desai (1969) the two male fawns of this species of Delhi Zoological Park weighed 1.360 Kg and 2.000 Kg and measured 41.3 cm and 52.0 cm in total length at birth. A barking deer fawn weighs about 0.550-0.650 Kg at birth (Walker *et al.* 1964). The birth weight of nine fawns was varying from 0.900 Kg to 2.000 Kg with an average of 1.520 Kg, the length from tip to tip at birth was from 43 cm to 55 cm with an average of 50 cm and the shoulder height was from 25 cm to 30 cm with an average of 27 cm (Acharjyo 1970). Acharjyo and Misra (1972) have given the mean weight of six fawns as 1.250 Kg, the mean length as 49.1 cm and the mean shoulder height as 24.9 cm at birth.

**MOUSE DEER:** A female fawn of this species weighed 203 grams, measured 27 cm in total length and had a shoulder height of 12.5 cm (Acharjyo and Misra 1972).

**BLACK BUCK:** One male black buck young at birth weighed 4.770 Kg. and measured 71.2 cm in total length (Sankhala and Desai 1969). According to Acharjyo and Misra (1972) the

average weight and size at birth of twelve blackbuck young were as follows: Weight, 3.558 Kg; the length 70.1 cm and the shoulder height 39.8 cm.

**FOUR-HORNED ANTELOPE:** The weight and size at birth of seven young of this species as reported by Acharjyo and Misra (1975) were as follows: Weight- from 0.75 to 1.2 Kg with an average of 1.04 Kg, length from tip to tip—from 42 to 45 cm with an average of 43.5 cm and the shoulder height—from 24.5 to 27 cm with an average of 25.2 cm. At birth one female young of this species weighed 1.250 Kg and had a total length of 45 cm (Sankhala and Desai 1969). At birth a fawn of this species weighed 2½ pounds, measured 15 inches in length and the shoulder height was 10 inches (Shull 1958).

**INDIAN WILD BOAR:** Seven piglets weighed from 325 to 665 gm with an average of 557.43 gm and measured 31.5 to 37 cm with an average of 35 cm and had shoulder heights from 14 to 16.5 cm with an average of 15.36 cm (Acharjyo and Misra 1974).

#### ACKNOWLEDGEMENTS

We are thankful to Shri B. L. Das, I.F.S., Chief Wild Life Warden, Orissa, Shri P. Mohapatra, I.F.S., Additional Chief Conservator of Forests, Orissa and Shri S. N. Das, I.F.S., Chief Conservator of Forests, Orissa for the facilities provided.

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## 7. ECOLOGY AND BEHAVIOUR OF GREAT INDIAN BUSTARD (FAMILY OTIDIDAE)

### INTRODUCTION

In Maharashtra the Great Indian Bustard is seen in Ahmednagar, Sholapur and Aurangabad districts in some numbers. The survival of the great Indian Bustard in these three districts is due to the presence of suitable habitat in the form of new forest areas which are being developed by D.P.A.P. and which provides them sufficient cover and food. These areas are protected from trespassers and are used for cultivation of new grass types such as Hamatu and Scresis under the guidance of the World Bank.

The present study was undertaken with a view to develop measures for its conservation as the bird is on the verge of extinction.

### HABITAT

The study was carried out at Nanaj, a small village 16 km from Sholapur city, and at Karmala of the same District of Maharashtra. Nanaj village is well known for its grapes. Under D.P.A.P. Scheme nearly 100 hectares of stony land 2 km from the village has been brought under a very successful plantation

programme. The whole area from Sholapur to Nanaj is bare open rocky land and Nanaj plantation is the only green patch in it. The height of the grass is c. 1 m, and the trees have grown to nearly 1.5 to 2 m. There is a small lake also near the plantation.

Karmala Taluka is well known for its barren landscape. Water is so scarce that people are not willing to give their daughters to youths from this place. Under D.P.A.P. Scheme the forest department is afforesting about 200 hectares of land which the birds inhabit.

I have seen a number of birds (7 to 12) at Karmala, another four birds at Akalkot Road near Sholapur City and 2 at Degaon, a place hardly 4 km from Sholapur City. The total number of Bustards in the district will not be more than 25 today.

### STUDY METHODS

The study commenced from 7th September, 1978 and continued till 9th August, 1980, and covered the hatching period at Nanaj in the month of September, and breeding period at Karmala and other places in November, December, January and March.